Rising water demand of energy sector

What is the issue?

\n\n

The water demand for the energy sector is projected to rise and makes it necessary to report its water consumption in the coming years.

\n\n

What is the situation of water crisis in India?

\n\n

\n
- The Composite Water Management Index (CWMI) by the NITI Aayog shows that 600 million people face high to extreme water stress in India.
\n
- The water quality index report places India at a dismal 120 among 122 countries.
\n
- It predicts that a persistent water crisis will lead to an eventual 6% loss in the country's GDP by 2030.
\n
- A significant key to this stress is the vast gulf that has been predicted between the demand [1498 billion cubic metres (BCM)] and supply [744 BCM] of fresh water, by 2030.
\n

\n\n

How far is the power sector, water dependent?

\n\n

\n
- In its 2015 projections, the Central Water Commission (CWC) reported that the sector-wise requirement of water (drinking and domestic use, industry and energy) will rise steeply between 2030 and 2050.
\n
- This is especially true in the energy sector, whose share of water consumed was 0.62% in 2010.
\n

- This is pegged to rise up to 1.37% in 2030 and 8.98% in 2050.
\n
- Thermal electricity accounts for more than 86% of India’s total power generation.
\n
- Analysis shows that 77% of these thermal power plants that are dependent on freshwater sources.
\n
- Around 40% of them are installed in areas with high or extremely high water-stress.
\n
- By 2030, more than 70% of India’s existing thermal power utilities are likely to experience an increased level of water competition from agricultural, urban, and other industrial demands.
\n
- As the power sector consumes more water, competition between power and the other thirsty players is only likely to increase.
\n

\n\n

What should be done?

\n\n

\n
- The CWMI raises three main issues related to data such as limited coverage, unreliable data and limited coordination and sharing between line departments.
\n
- To rectify this, daily water withdrawal and consumption reporting should be mandated.
\n
- These can be measured with existing technology and added into this reporting framework.
\n
- Such information will also help in the implementation of the MoEFCC Notification, which mandates specific water consumption norms for existing and new thermal power plants.
\n

\n\n

How does the CWMI help in this regard?

\n\n

\n

- CWMI is expected to establish a public, national platform providing information on key water indicators across states.
\n
- The platform will help in monitoring performance, improving transparency and encouraging competition among the states.
\n
- This will, in turn, boost the country’s water achievements by fostering the spirit of competitive and cooperative federalism among the states.
\n
- Further, the data can also be used by researchers, entrepreneurs, and policymakers to enable broader ecosystem innovation for water in India.
\n
- The CWMI noted that water-scarce States such as Gujarat, Madhya Pradesh, Andhra Pradesh, Karnataka, Maharashtra and Telangana are leaders in the Index.
\n
- It notes that this is likely driven by necessity in the face of looming water shortages.
\n
- Thus, water-energy nexus linkages, especially the metrics around power plant water withdrawal and consumption, have to be factored in while calculating the Index.
\n
- This will help make the Index better and also the States to be better prepared on managing their water and power resources.
\n

\n\n

\n\n

Source: The Hindu

\n\n

\n

